Quantum Simulation Results (Shots: 1000)

Position (Number of 1s) vs Frequency
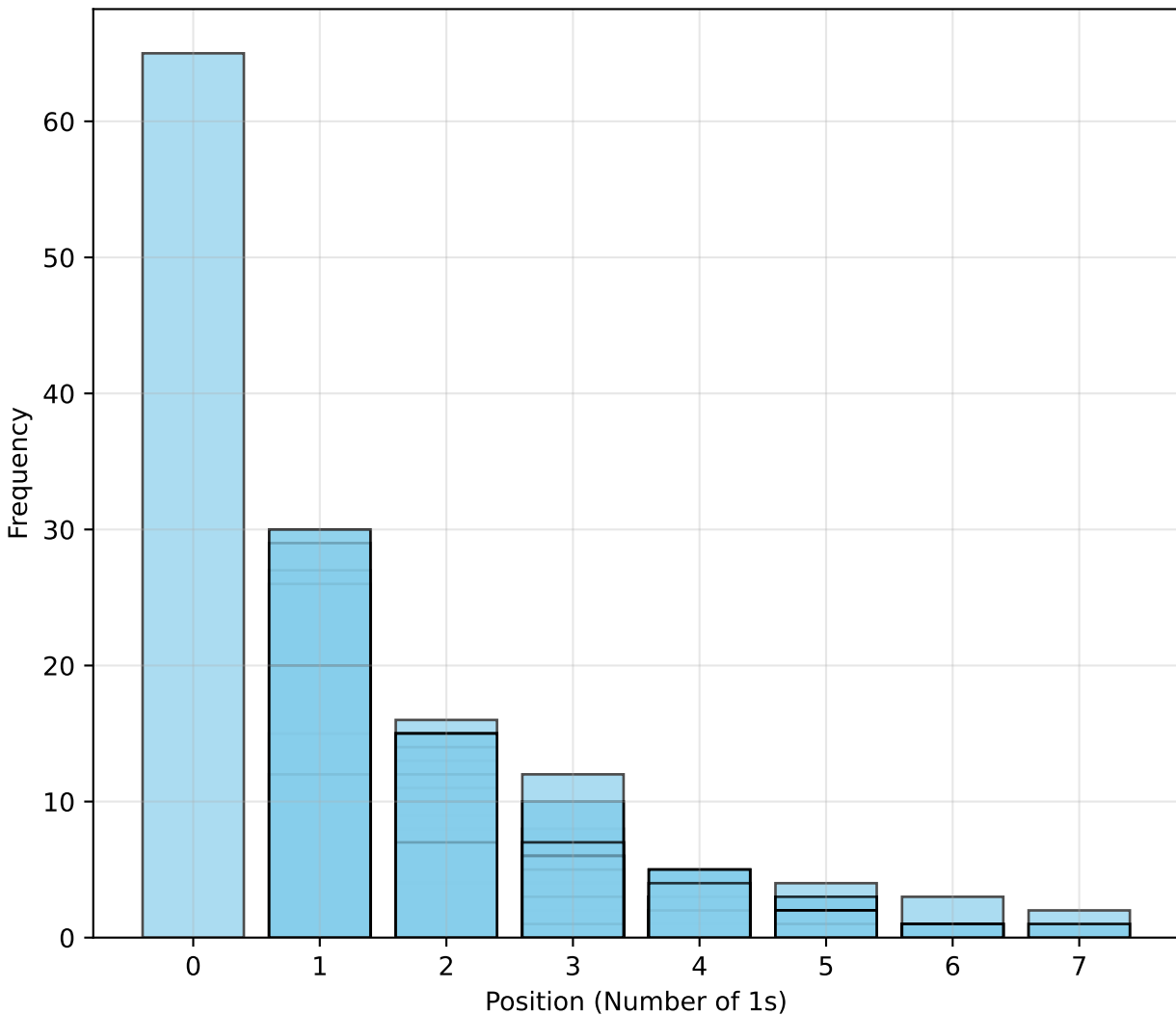
Quantum vs Theoretical Distribution

Position vs Frequency

Legend: Quantum, Theoretical
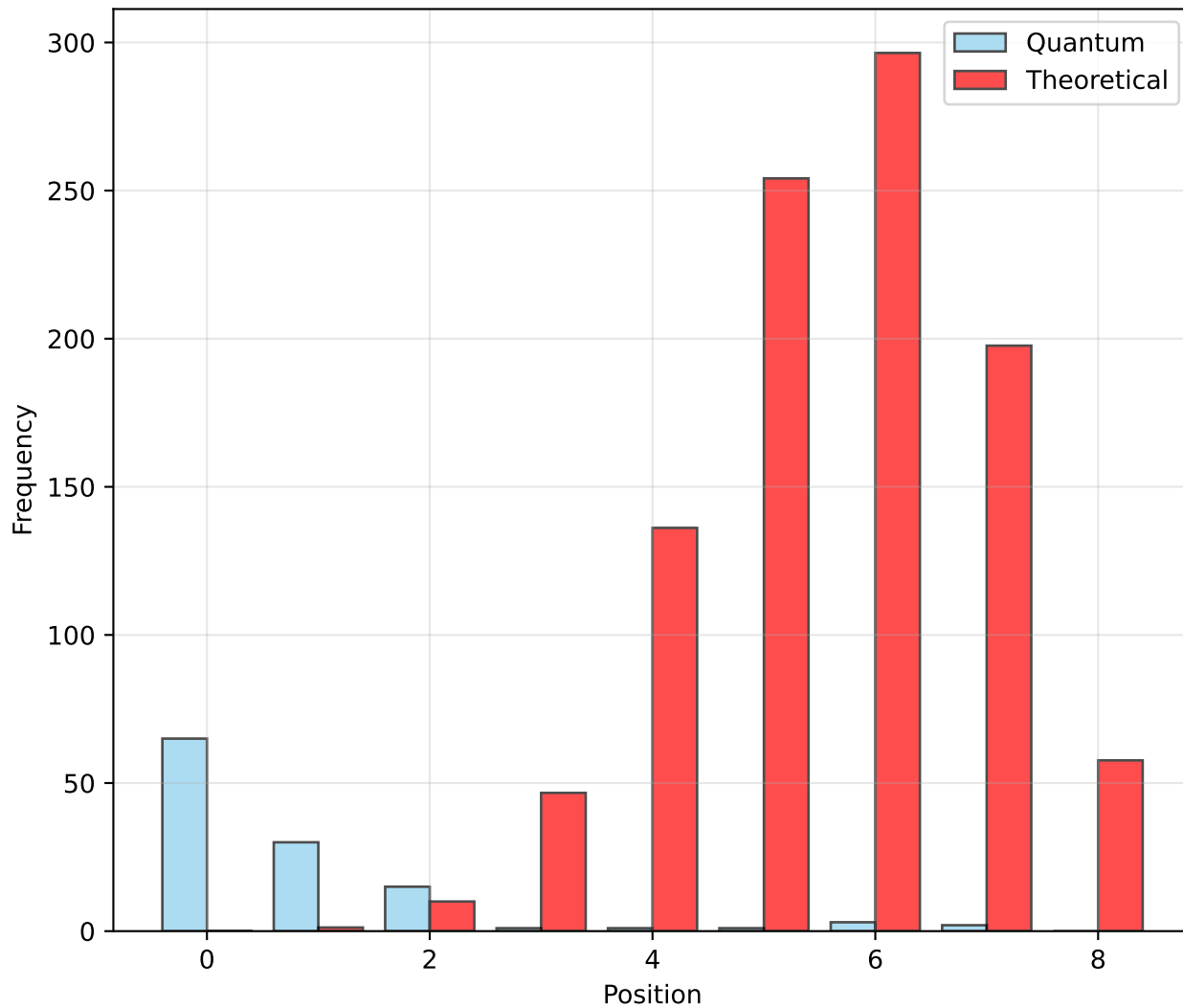
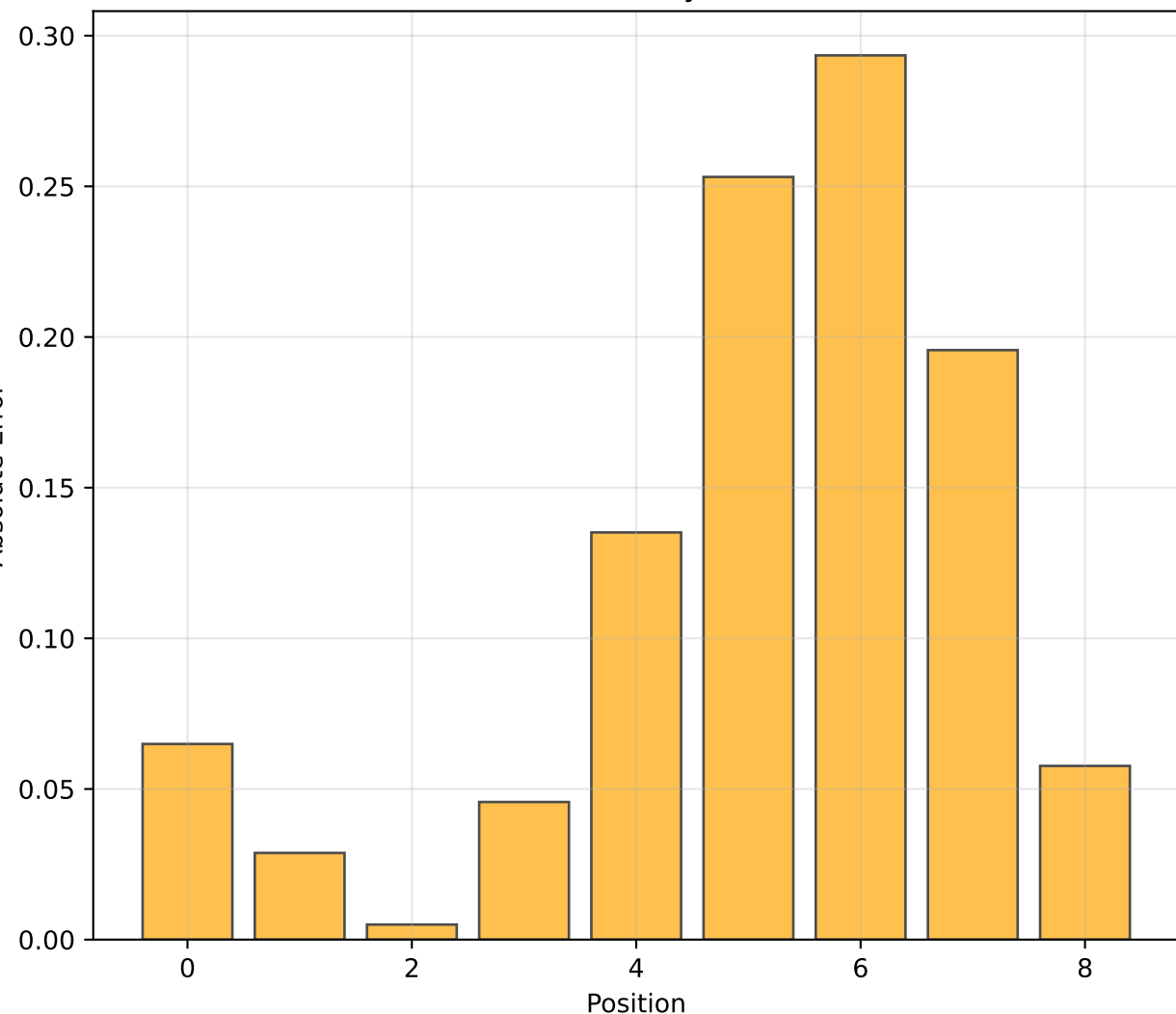## Probability Distribution Comparison

Position vs Probability

Legend: Quantum, Theoretical

Error Analysis

Position vs Absolute Error
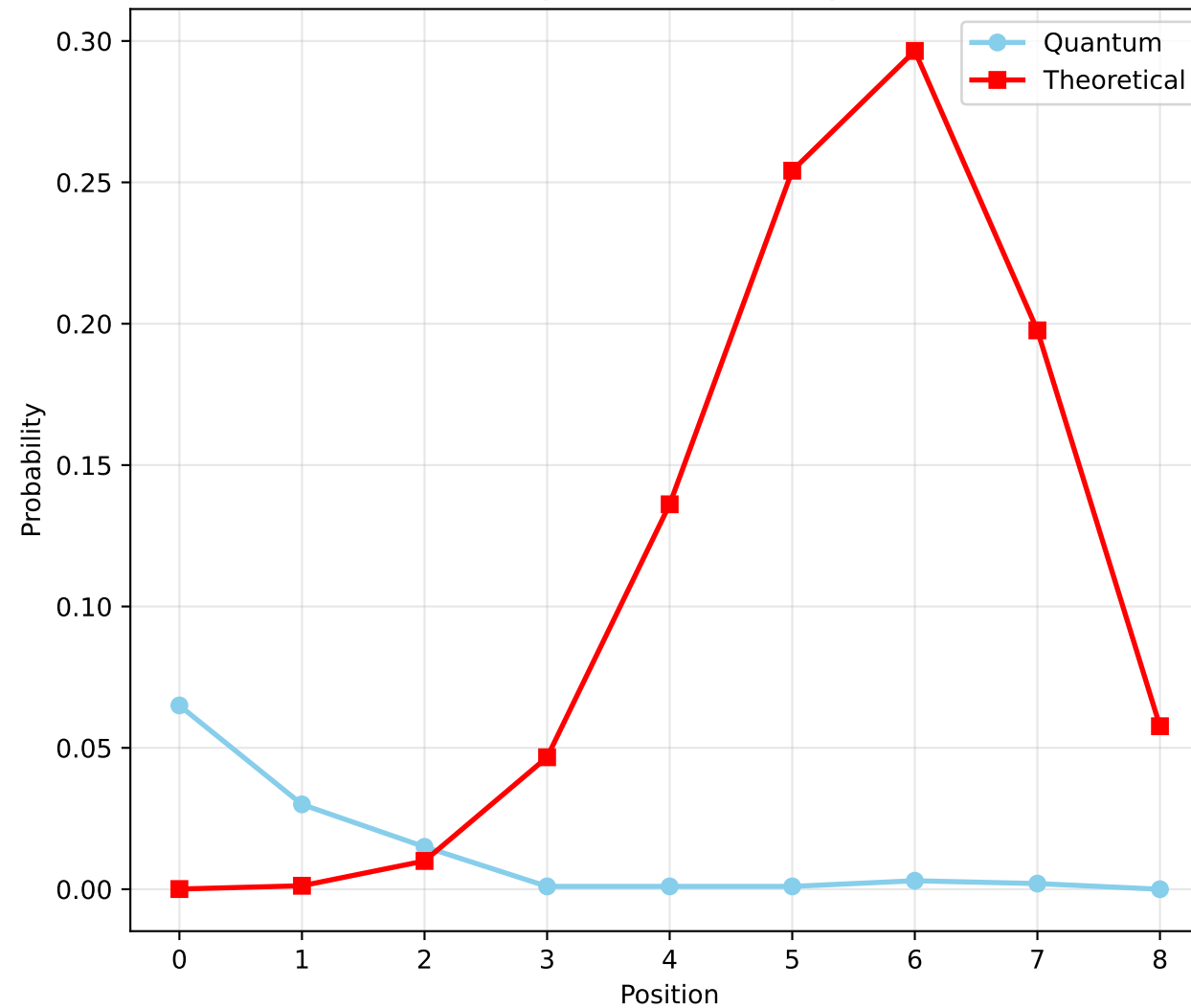
Statistics Summary:

Total Shots: 1000
Mean Position: 2.416
Theoretical Mean: 5.600
Variance: 1.811
Standard Deviation: 1.346
Theoretical Std Dev: 1.296

Bias Parameter: 0.7
Number of Levels: 8

Quantum Circuit Info:

Number of Qubits: 8
Circuit Depth: 8
Bias Parameter: 0.7

Circuit Operations:
- RY gates for bias
- CX gates for entanglement
- RZ gates for phase
- Measurement